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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,645	12/22/2000	Aman Gupta	GEMS8081.056	4526
26629	7590	10/20/2006	EXAMINER	
ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (ZPS) 14135 NORTH CEDARBURG ROAD MEQUON, WI 53097				JEANTY, ROMAIN
ART UNIT		PAPER NUMBER		
				3623

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/747,645	GUPTA ET AL.
Examiner	Art Unit	
Romain Jeanty	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 18 July 2006.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-27 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) Notice of Informal Patent Application
6) Other: _____

DETAILED ACTION

1. This Office action is in response to the communication received on July 18, 2005.

Claims

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites “.. to indicate quality calculation” only as intended result of the acts of subtracting and adding and processing. However, there is no positive recitation that the intended results indeed occur. For example, shipment quality may not be obtained even if that is what is intended by the subtracting and adding steps.

This deficiency causes a result that there is no positive antecedent basis for limitation “the shipment quality metric” because the obtaining the shipment quality metric is only intended result and not positive recited.

This deficiency can be overcome by amending the claim to recite the acts of obtaining and determining Positively as follows:

indicating process quality by subtracting determining...;

Claim 11 recites “..to obtain a shipment quality metric” and “to determine overall shipment quality” only as intended result of the acts of subtracting and adding and processing. However, there is no positive recitation that the intended results indeed occur. For example, shipment quality may not be obtained even if that is what is intended by the subtracting and adding steps.

This deficiency causes a result that there is no positive antecedent basis for limitation “the shipment quality metric” because the obtaining the shipment quality metric is only intended result and not positive recited.

This deficiency can be overcome by amending the claim to recite the acts of obtaining and determining Positively as follows:

obtaining a shipment quality metric by subtracting ...;
determining overall shipment quality

Claims 2-10, and 12-16 depend from independent claims 1, and 11; therefore claims 2-10, and 12-16 are rejected under the same analysis relied upon of claims 1, and 11.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "promote the progress of science and useful arts, by securing for limited times to

authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-

Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these

analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, *State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

In the present application, claim 1 recites "a statistical calculation". However, the claim as a whole does not recite any result that is concrete, tangible, and useful of the statistical calculation. The claim recites the term "statistical calculation" which is not concrete because without defining what this term means in the real world, one can not assume that same result is achieved (i.e. concrete), not tangible because this term does not relate to anything in the real world, not useful because the claim does not recite utility of the invention (i.e. no usefulness) or relates to real world application.

In the present application, claim 17 recites "...compute and display a statistical value...". However, the claim as a whole does not recite any result that is concrete, tangible, and useful of the statistical value. The claim recites the term "statistical value" which is not concrete because without defining what this term means in the real world, one can not assume

that same result is achieved (i.e. concrete), not tangible because this term does not relate to anything in the real world, not useful because the claim does not recite utility of the invention (i.e. no usefulness) or relates to real world application.

Claims 2-10, 12-16, 18-26 depend from independent claims 1, 11, and 17; therefore claims 2-10, 12-16, and 18-26 are rejected under the same analysis relied upon of claims 1, 11, and 17.

In the present application, claim 27 recites "...determining a long term process capability value". However, the claim as a whole does not recite any result that is concrete, tangible, and useful of the process capability value. The claim recites the term "process capability value" which is not concrete because without defining what this term means in the real world, one can not assume that same result is achieved (i.e. concrete), not tangible because this term does not relate to anything in the real world, not useful because the claim does not recite utility of the invention (i.e. no usefulness) or relates to real world application.

From this it can be seen that the broadest reasonable equivalent disclosed that the claims recite non-statutory subject matter under 35 USC 101.

Claims 2-10, 12-16 depend from independent claims 1 and 11; therefore claims 2-9, 12-16 are rejected under the same rationale relied upon of claims 1 and 11.

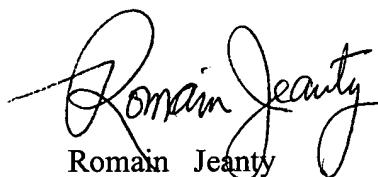
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Romain Jeanty whose telephone number is (571) 272-6732. The examiner can normally be reached on Mon-Thurs 7:30 am. to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq R. Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

October 2, 2006



Romain Jeanty
Primary Examiner
Art Unit 3623